

Remarks

Applicants respectfully request reconsideration and withdrawal of the finality of the rejection. Claims 1-6, 9, 15-17, and 20 are amended. The rotary filter embodiment has been specified as a rotary pressure filter. *Applicants' specification* at page 5, lines 28-30. The feature of the preferred pressure of 0.6 to 3.8 bar is now recited. *Id.* at page 7, lines 13-14. Claim 2 recites a phenol-tight and and gas-tight rotary pressure filter for continuous operation. *Id.* at page 5, lines 30-31 and page 6, line 2.

Claims 1-22 are pending and have been rejected under 35 U.S.C. § 103 as being unpatentable over Rainer et al. DE 19961521¹ (hereinafter "Rainer"). If entered, the previous rejection will be rendered moot by amendment.

Rainer fails to suggest anywhere conducting the process in a rotary pressure filter. In contrast, Rainer teaches the usage of a vacuum filter (*paragraphs [0015] and [0019] and claim 1 of US 2003/0038094*). Applicants have found that the usage of a pressure filter minimizes the risk that air in the atmosphere gets into contact with the adduct of a bis(4-hydroxyaryl)alkane and a phenolic compound and can cause discoloration of the adduct. In vacuum drum filters as taught by Rainer, there is a significantly higher risk that air is sucked in the vacuum filter, which can cause discoloration of the adduct.

As previously acknowledged by the Examiner, Rainer fails to teach a step of pre-drying the adduct cake with an inert gas. Moreover, the process of claim 1 has been further removed from the prior art by specifying that i) the process is conducted in a rotary pressure filter, ii) pre-drying the adduct cake is conducted with an inert gas at a pressure of from 0.2 to 6 bar above atmospheric, and iii) drying of the washed adduct cake is mandatory, i.e., the presently claimed process comprises at least two drying steps.

¹ DE 19961521 (cited by the present Office Action) and US 2003038094 were both listed as patent family members of WO 01/46105 cited in the International Search Report for the parent application of the present case. For the Examiner's convenience Applicants refer to US 2003/0038094 A.

The Examiner has repeated his position that "Since there are inert gases in the atmosphere and before the adduct is put into the filter it is in the atmosphere drying via inert gas, it would have been obvious for one of ordinary skill in the art to pre-dry the adduct cake before putting it into the filter." *Final Rejection*, page 4, first paragraph. As previously submitted, Applicants urge that in the process of the present invention, a suspension, *not an adduct cake* is put into a rotary filter (*step a*). A suspension by definition comprises a large amount of liquid. For illustration purposes only, the suspension preferably comprises 2-40 wt.% adduct crystals (*page 5, lines 12-17 of the instant patent application*). The adduct cake *is obtained in step b*) by filtering the supplied suspension, the adduct cake is *not put separately from the liquid* into a rotary filter. Also according to [0016] of US 2003/0038094, BPA/phenol adduct crystal *suspension* passes into the vacuum drum filter via a feed stream. The solids content in the feed stream is preferably 5-25%, in particular 20-30%. Applicants respectfully submit that without the improper benefit of hindsight, **it cannot be obvious to pre-dry (before washing) an adduct cake, that has been produced by filtering a suspension, based upon a teaching that a suspension comprising a large amount of liquid (not the separated adduct) can be in contact with the atmosphere.**

As to the Examiner's finding on page 4, lines 7-9, repeated from the previous Office Action, stating "Please also note that Rainer purifies continuously; therefore there is actually drying taking place before washing as the steps are done more than once," Applicants can rebut that assertion - Rainer's disclosure does not teach or suggest anywhere repeated washing steps. In the continuous process taught by Rainer, vacuum drum filters are used which contain as filter cells a cake-forming zone (12), a washing zone (13), a drying suction zone (14), an aeration zone (15) and optionally a cake removal zone (10) and a cloth rinsing zone ([0015] of US 2003/0038094). Rainer's disclosure does not teach or suggest anywhere that the adduct cake passes the washing zone (13) repeatedly.

The Examiner has indicated that, "The Examiner contends that the language used in the claims, "comprising", allows for the steps to be done in any order." Final Rejection, page 4, last line - page 5, first line. Applicants respectfully submit that the meaning of words used in a claim is not to be construed in a lexicographic vacuum, but in the context of the specification and drawings. It is clear from the terminology used in the claims ["supplied suspension" in step b), "adduct cake" in step c), "pre-dried adduct cake" in step d), "washed adduct cake" in step e) and "washed, dried adduct cake" in step f)] that steps a) – f) in the process of the present invention have to be done in a certain, logically dependent, order.

On page 5, first paragraph of the final Rejection, the Examiner has further indicated that "If the applicant feels that there are unexpected results in the exact order of the claims, the Examiner puts the burden on the applicants to file a side by side comparison of the two different processes showing unexpected results that their process is more efficient." With respect to the side to side comparison requested by the Examiner, Applicants submit that the side to side comparisons, as illustrated in Examples 1 / 2 and in Examples 3 / 4, indeed do show unexpected results.

Example 2 was carried out as comparative Example 1, except that in inventive Example 2, the adduct crystals *were pre-dried with nitrogen at a pressure above atmospheric*. The bisphenol A obtained according to **comparative Example 1** had a concentration of **1450 ppm of o,p-isomer** of Bisphenol A and a color of **10 APHA**, whereas the bisphenol A obtained according to **Example 2** had a concentration of **only 1040 ppm of o,p-isomer** of Bisphenol A and a color of **only 8 APHA**.

Example 4 was carried out as comparative Example 3, except that in the inventive Example 4, the adduct crystals *were pre-dried with nitrogen at a pressure above atmospheric*. The bisphenol A obtained according to **Comparative Example 3** had a concentration of **1240 ppm of o,p-isomer of Bisphenol A** and a color of **7 APHA**, whereas the bisphenol A obtained according to **Example 4** had a concentration of **only 710 ppm of**
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o,p-isomer of Bisphenol A and a color of **only 2 APHA**.

Accordingly, Examples 1 / 2 and Examples 3 / 4, indeed do show unexpected results. Nothing in the teaching of Rainer would motivate the skilled artisan to do a pre-drying step before the washing step.

The Examiner is cordially invited to call the undersigned if it will facilitate prosecution.

Respectfully submitted,

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